

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Plant Abstract

Element Code: PDFAB5M020

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Psoralidium junceum*
COMMON NAME: Rush Scurfpea
SYNONYMS: *Psoralea juncea*, *Ladeania juncea*
FAMILY: Fabaceae

AUTHOR, PLACE OF PUBLICATION: Rydberg, Per Axel. North American Flora
24(1): 17. 1919.

TYPE LOCALITY: United States: Utah: Epsom Creek.

TYPE SPECIMEN: GH 63888 (Isotype of *Psoralea juncea*). A. Eastwood, #21. July 13, 1895.

TAXONOMIC UNIQUENESS: There are three species of *Psoralidium*: *P. junceum*, *P. lanceolatum*, and *P. tenuiflorum*. All three are found in Arizona. *P. junceum* is only found in AZ and UT, while the other two are much more widespread and even extend into Canada.

DESCRIPTION: Perennial, Shrubs, Herbs, Plants with rhizomes or suckers, Taproot present, Nodules present, Stems erect or ascending, Stems less than 1 m tall, Plants gland-dotted or with gland-tipped hairs, Stems solid, Stems or young twigs sparsely to densely hairy, Leaves absent at flowering time, Leaves alternate, Leaves petiolate, Stipules conspicuous, Stipules setiform, subulate or acicular, Stipules persistent, Stipules free, Leaves compound, Leaves palmately 2-3 foliate, Leaf or leaflet margins entire, Leaflets 1, Leaflets 3, Leaves glandular punctate or gland-dotted, Leaves hairy on one or both surfaces, Flowers in axillary clusters or few-flowered racemes, 2-6 flowers, Inflorescences racemes, Inflorescence axillary, Flowers zygomorphic, Calyx 5-lobed, Calyx hairy, Petals separate, Corolla papilionaceous, Petals blue, lavender to purple, or violet, Banner petal suborbicular, broadly rounded, Wing petals narrow, oblanceolate to oblong, Wing tips obtuse or rounded, Stamens 9-10, Stamens or anthers dimorphic, alternating large and small, Stamens diadelphous, 9 united, 1 free, Filaments glabrous, Style terete, Fruit a legume, Fruit unilocular, Fruit indehiscent, Fruit orbicular to subglobose, Fruit coriaceous or becoming woody, Fruit exserted from calyx, Fruit beaked, Fruit hairy, Fruit 1-seeded, Seeds reniform, Seed surface smooth, Seeds olive, brown, or black. (Encyclopedia of Life 2014.)

AIDS TO IDENTIFICATION: The three species of *Psoralidium* can be distinguished as follows: *P. junceum* has peduncles 15-40 cm long or more, few leaves which are mostly deciduous by anthesis; leaflets are sharply acuminate. The other two species have peduncles mainly shorter than 15cm, numerous leaves that persist throughout the season, and leaflets

that are obtuse to rounded or cuspidate. *P. tenuiflorum* plants are commonly 4-10 dm tall, with at least some leaves 4- to 5-foliate and flowers that are mostly indigo. *P. lanceolatum* plants are often less than 1 dm tall, all leaves are commonly 3-foliate, and flowers are white to purple. (Welsh et al 1993.)

ILLUSTRATIONS:

Photos: [http://swbiodiversity.org/seinet/taxa/index.php?taxon=Psoralidium junceum](http://swbiodiversity.org/seinet/taxa/index.php?taxon=Psoralidium+junceum).

TOTAL RANGE: Localized along the Paria, San Juan and Colorado Rivers in southeastern Kane and southern San Juan Counties, Utah and northern Coconino County, Arizona. Apparently isolated in eastern Garfield County, Utah.

RANGE WITHIN ARIZONA: All of the 20+ Arizona collection sites are within 20 miles of Page, on both sides of the Colorado River, in Coconino County. The two sites not within this radius are nearly 70 air miles SW from Page along the Colorado River itself, at river miles 94 and 131.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial, woody shrub.

PHENOLOGY: Specimens collected in Arizona throughout May were in flower.

BIOLOGY:

HABITAT: On open sand dunes, semi-stabilized sand dunes, sandy riparian and other sandy settings; also rocky slopes or salt encrusted mud.

ELEVATION: Collection sites in Arizona range from 1975 – 5415 feet (600-1650m).

EXPOSURE: Not specified, but probably open.

SUBSTRATE: A variety of sandy soils; also reported from salt encrusted mud.

PLANT COMMUNITY: Desert scrub, often with *Amsonia tomentosa*, Indian rice-grass, *Vancleavea stylosa*, purple sage, sand sagebrush and blackbrush (Welsh et al 1993). Plant species associated with Arizona collections include: *Coleogyne ramosissima*, *Ephedra viridis*, *Atriplex canescens*, *Poliomintha incana*, *Penstemon ambiguus*, *Rumex*, *Dicoria*, *Dithyrea*, *Artemisia filifolia*, *Thamnosma montana*, *Psoralea arborescens* var. *pubescens*, *Achnatherum hymenoides*, *Malacothrix glabrata*, *Mentzelia multiflora*, *Yucca baileyi*, *Helianthus anomalus*, *Sporobolus cryptandrus*, *Lupinus pusillus*, *Cryptantha mivrantha*, *C. jamesii* var. *pustulosa*, *Eriogonum leptocladon*, *E. corymbosum*, *Echinocereus coccineus*, *Opuntia basilaris longiareolata*, *Isocoma acradenia*, *Sphaeralcea*, *Pluchea sericea*, *Opuntia*

polyacantha erinacea, *Cercis orbiculata*, *Brockellia longifolia*, *Ephedra torreyana*, *Opuntia nicholii*, *Artabotrys*, *Ericameria nauseosa*, *Psorothamnus fremontii*, *Echinocereus triglochidiatus*.

POPULATION HISTORY AND TRENDS: Unknown. About half of the known sites in Arizona are historical, while the remainder have been collected within the past 15 years. Only one has been visited and collected on multiple dates. When information was recorded, a number of collection records indicate that the plant was locally common, another noted it was occasional. Although *P. junceum* has a very limited distribution along its three river systems in southern Utah and northern Arizona, it seems well adapted to its preferred sandy habitats and no known management concerns have been stated. The two collections made along the Colorado River canyon bottom about 100 miles downstream are interesting outliers. One can speculate whether these are remnant populations or might represent an expansion as seeds are carried downstream and take root along the sandy river banks.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None.

STATE STATUS: None.

OTHER STATUS: None.

MANAGEMENT FACTORS: None specified. The species seems well situated on its preferred sandy habitat types, and these habitats are commonly distributed throughout parts of northern Arizona.

PROTECTIVE MEASURES TAKEN: None specified. However, more than half (13 of 20) known sites have some level of administrative protection from the National Recreation Area, National Park, or designated Wilderness Area lands occupied.

SUGGESTED PROJECTS: Re-visit known sites (especially the 9-10 that are historical records) to verify whether *P. junceum* is still present. Record additional information on population numbers and extent of the populations.

LAND MANAGEMENT/OWNERSHIP: Almost half (8) of the twenty known collection sites in Arizona are on BLM Arizona Strip lands and six of these are within the Paria Canyon-Vermillion Cliffs Wilderness Area. Another seven are under U.S. National Park Service jurisdiction either in the Glen Canyon NRA (5) or Grand Canyon NP (2), and five are on the BIA Navajo Nation lands.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

- Encyclopedia of Life, accessed 7/22/2014, <http://eol.org/pages/639013/details>.
Grimes, J. W. 1990. A revision of the New World species of Psoraleeae (Leguminosae: Papilionoideae). Mem. New York Bot. Gard. 61:32.
JStor| Global Plants, accessed 7/22/2014, <http://plants.jstor.org/specimen/gh00063888?s=t>.
Tropicos, accessed 7/22/2014, <http://www.tropicos.org/Name/13015452>.
Welsh, S.L., N.D. Atwood, S. Goodrich and L.C. Higgins, eds. 1993. 2nd ed., revised. A Utah Flora. Brigham Young University, Provo, Utah.

MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

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